

NOAA UAS: Science Applications



John.Durban@noaa.gov

UAS Symposium Structure



Tuesday - Current Applications

Wednesday – Management and regulations

Thursday – Moving forward

Our example



January 2011



Highly effective



Polar Biol (2015) 38:619–630
DOI 10.1007/s00300-014-1625-4

ORIGINAL PAPER

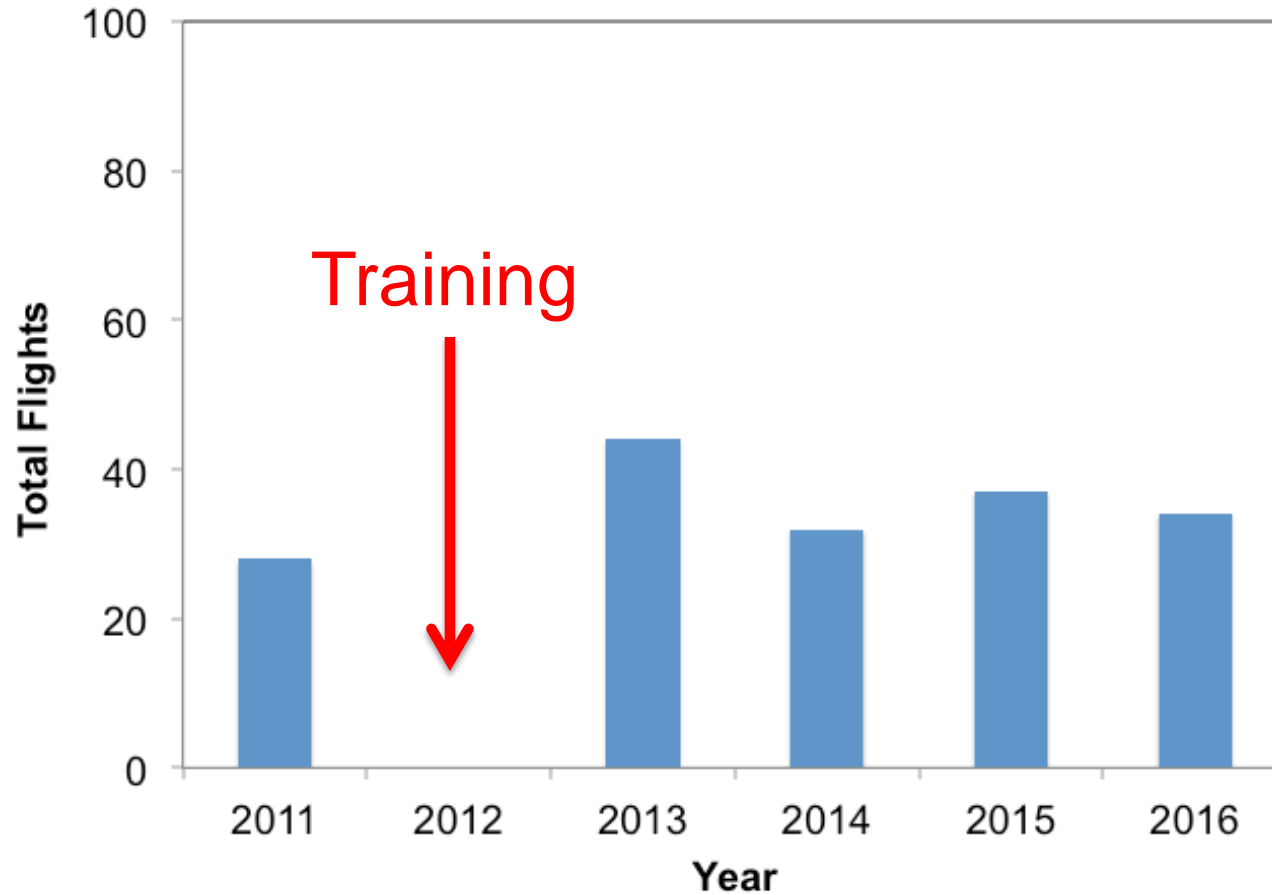
A small unmanned aerial system for estimating abundance and size of Antarctic predators

**Michael E. Goebel · Wayne L. Perryman ·
Jefferson T. Hinke · Douglas J. Krause ·
Nancy A. Hann · Steve Gardner · Donald J. LeRoi**

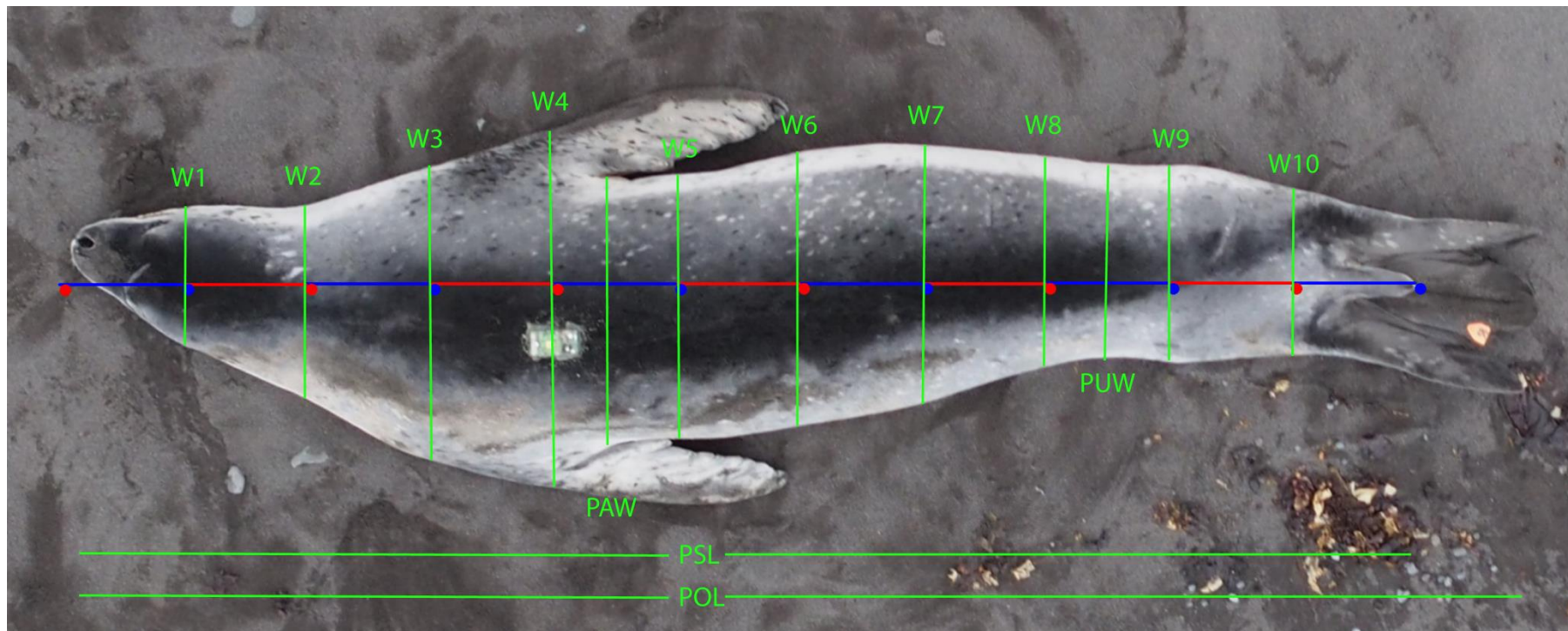
Scientists as pilots



Operational use



Doug Krauss – leopard seal condition



Jefferson Hinke – Antarctic predator counts

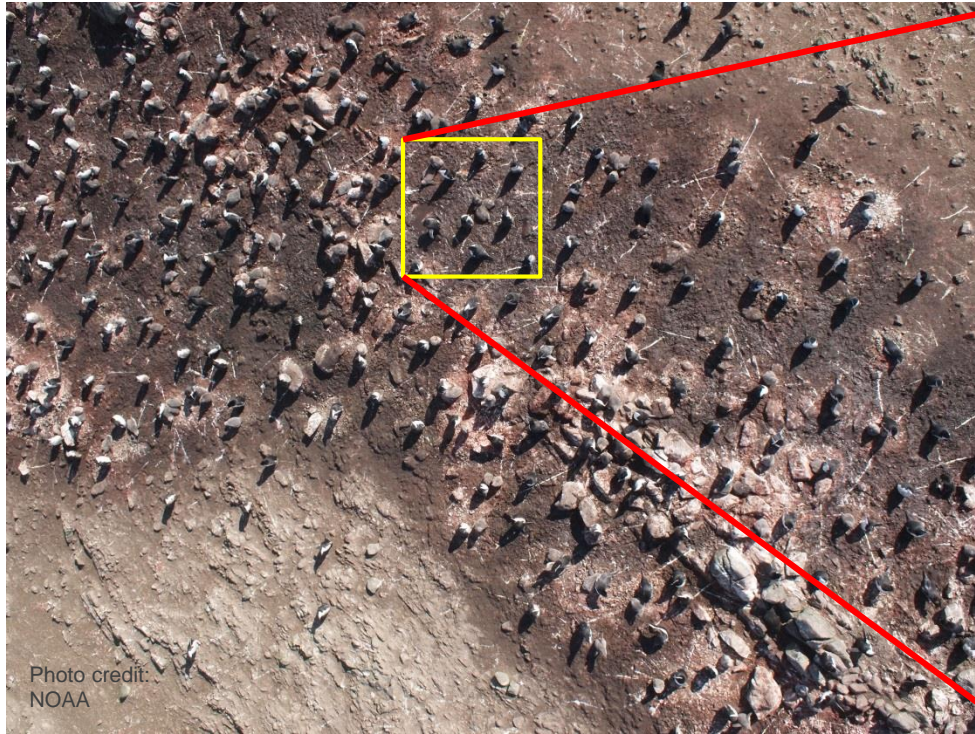


Photo credit:
NOAA



Portable, cost-effective, safe



[Science & Environment](#)

In pictures: Drones take whale science to new heights

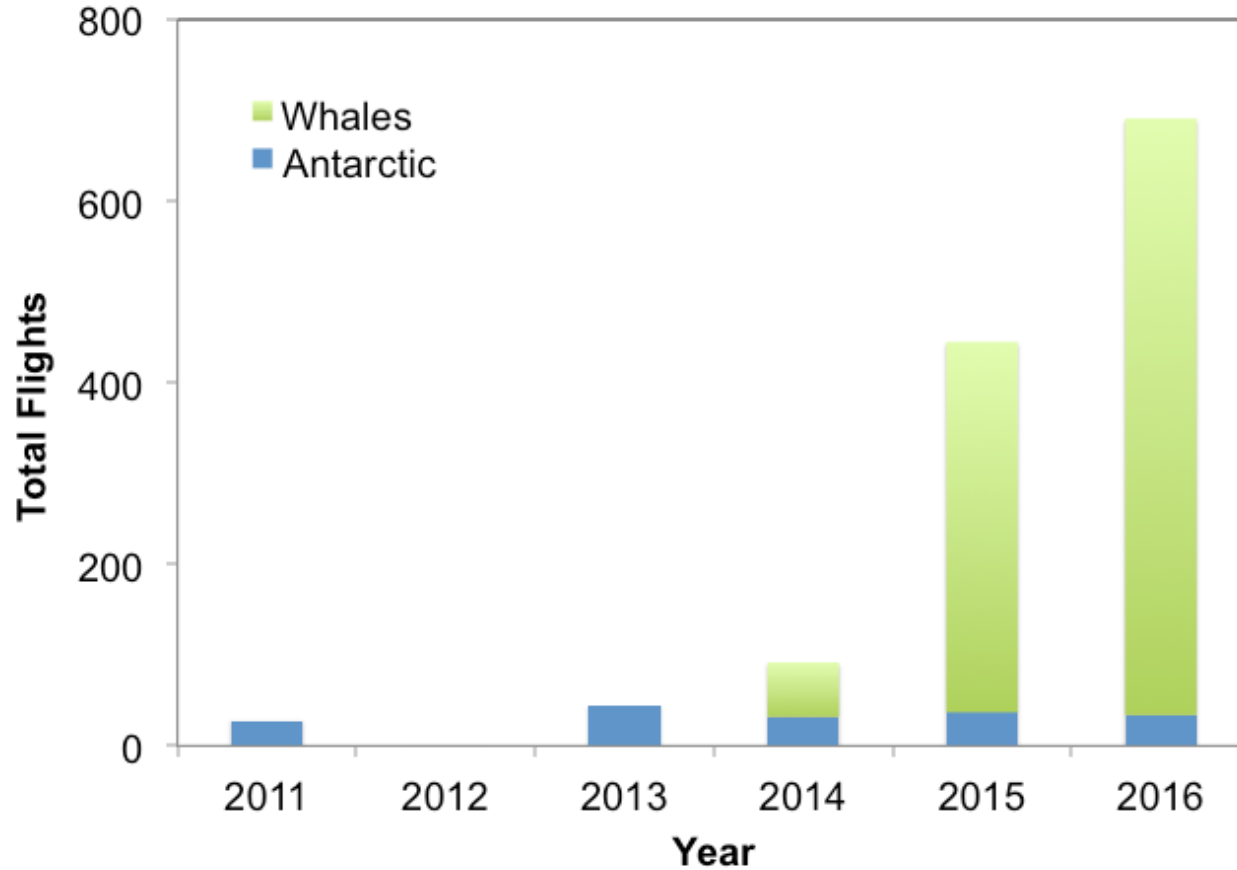
🕒 30 May 2015 | [Science & Environment](#)



Gray whales can weigh more than 30,000kg



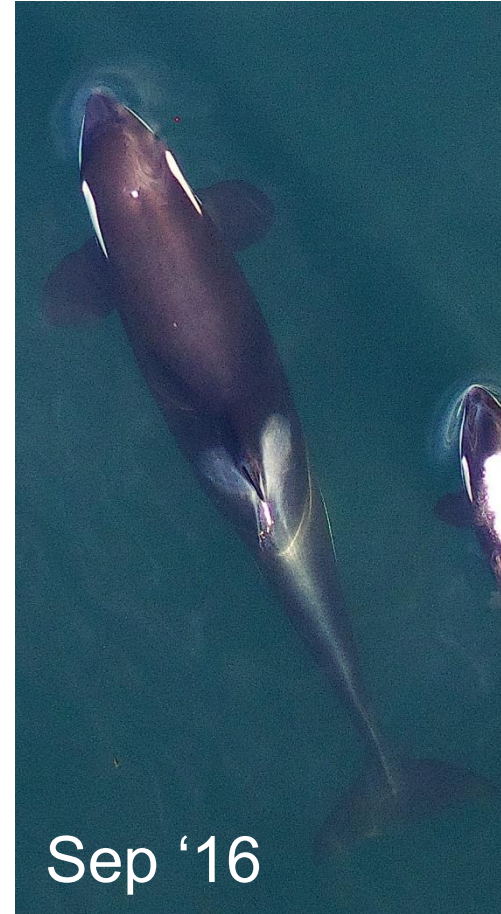
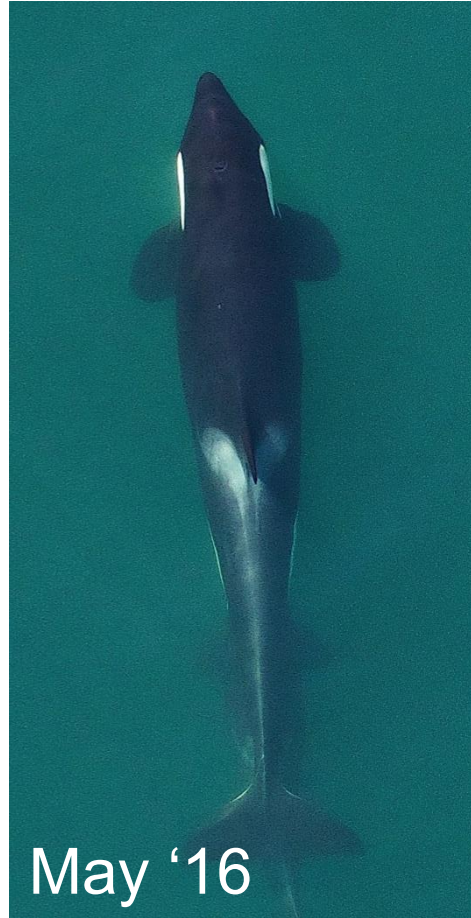
Increasing use



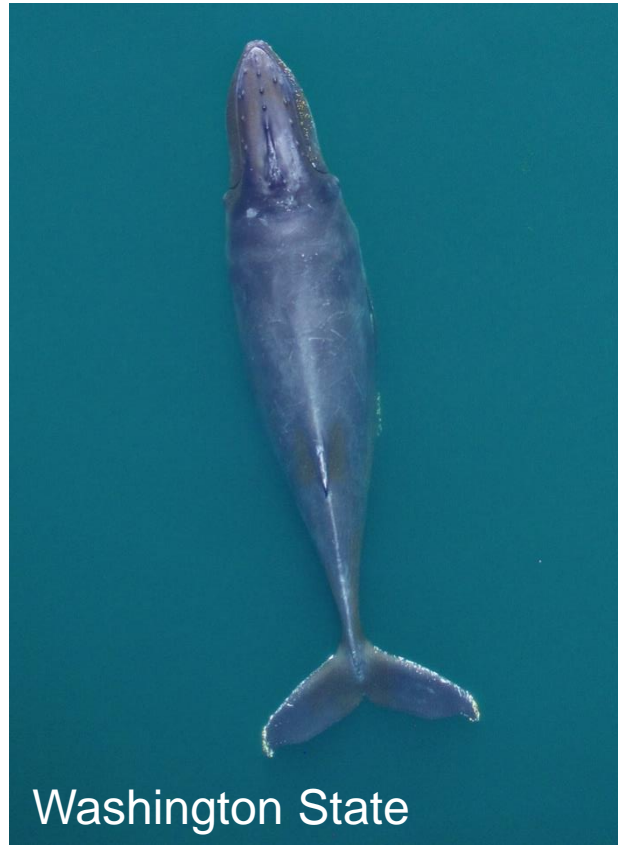
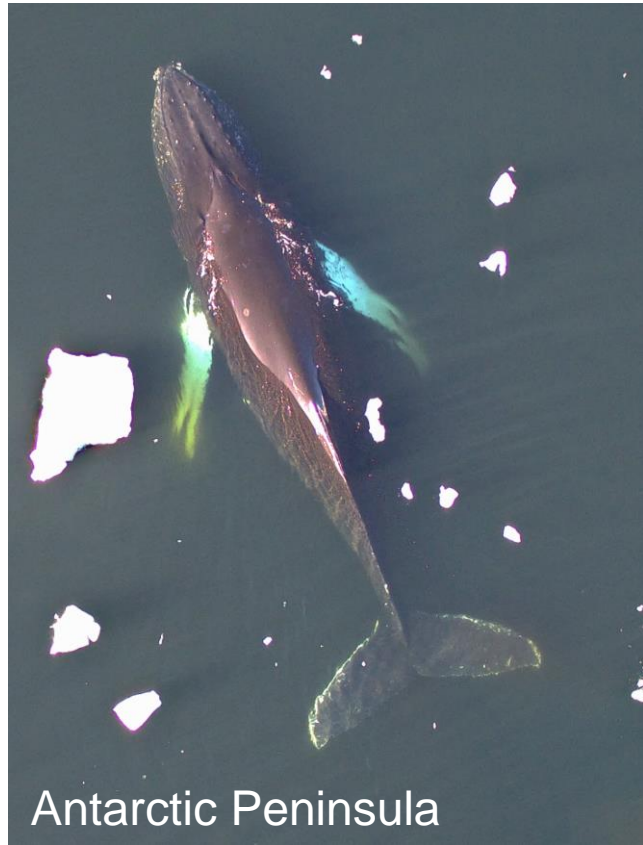
Accessible



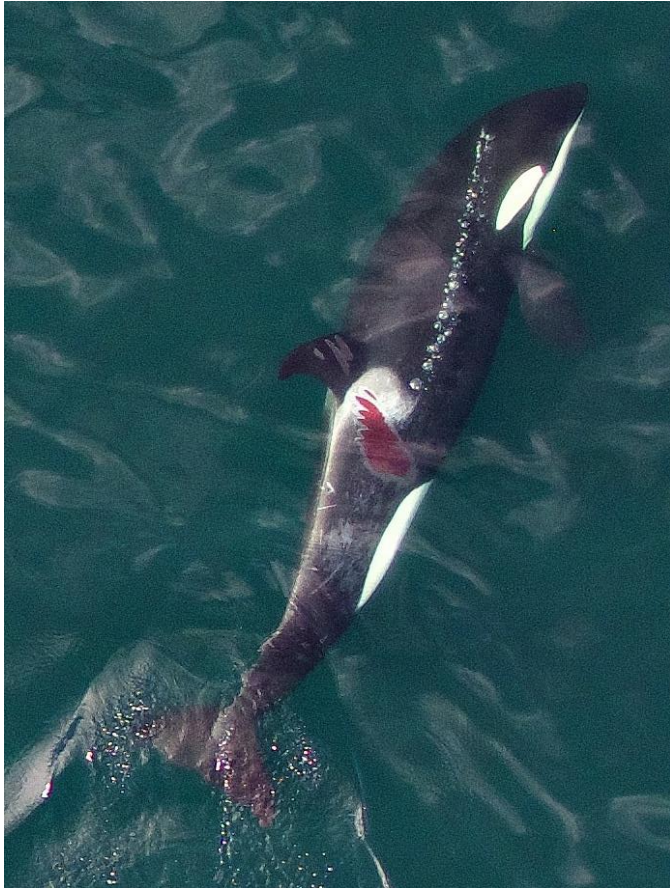
John Durban – whale photogrammetry



John Durban – whale photogrammetry



Holly Fearnbach – whale health



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News > Plants & Animals > Drones give whales a breathalyzer test

SCIENCESHOT

A small black drone with yellow and red accents is flying over a blue ocean. It is releasing a fine mist or spray of water that is directed towards the blow of a whale, which is visible as a dark shape just below the surface of the water.

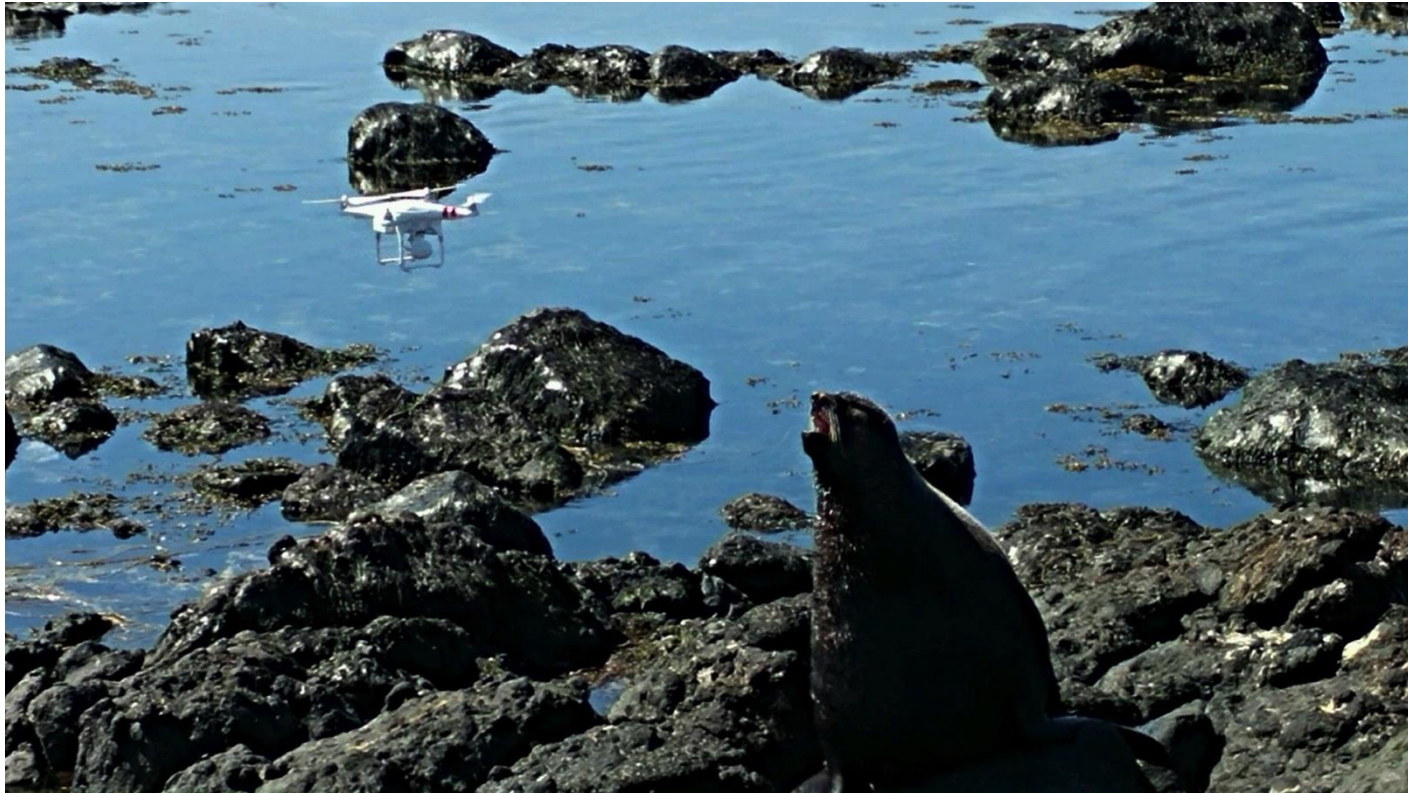
PHOTO BY MICHAEL MOORE, WOODS HOLE OCEANOGRAPHIC INSTITUTION; ACQUIRED UNDER NATIONAL MARINE FISHERIES SERVICE PERMIT 17355-01 AND NOAA CLASS G FLIGHT AUTHORIZATION 2015-ESA-4-NOAA)

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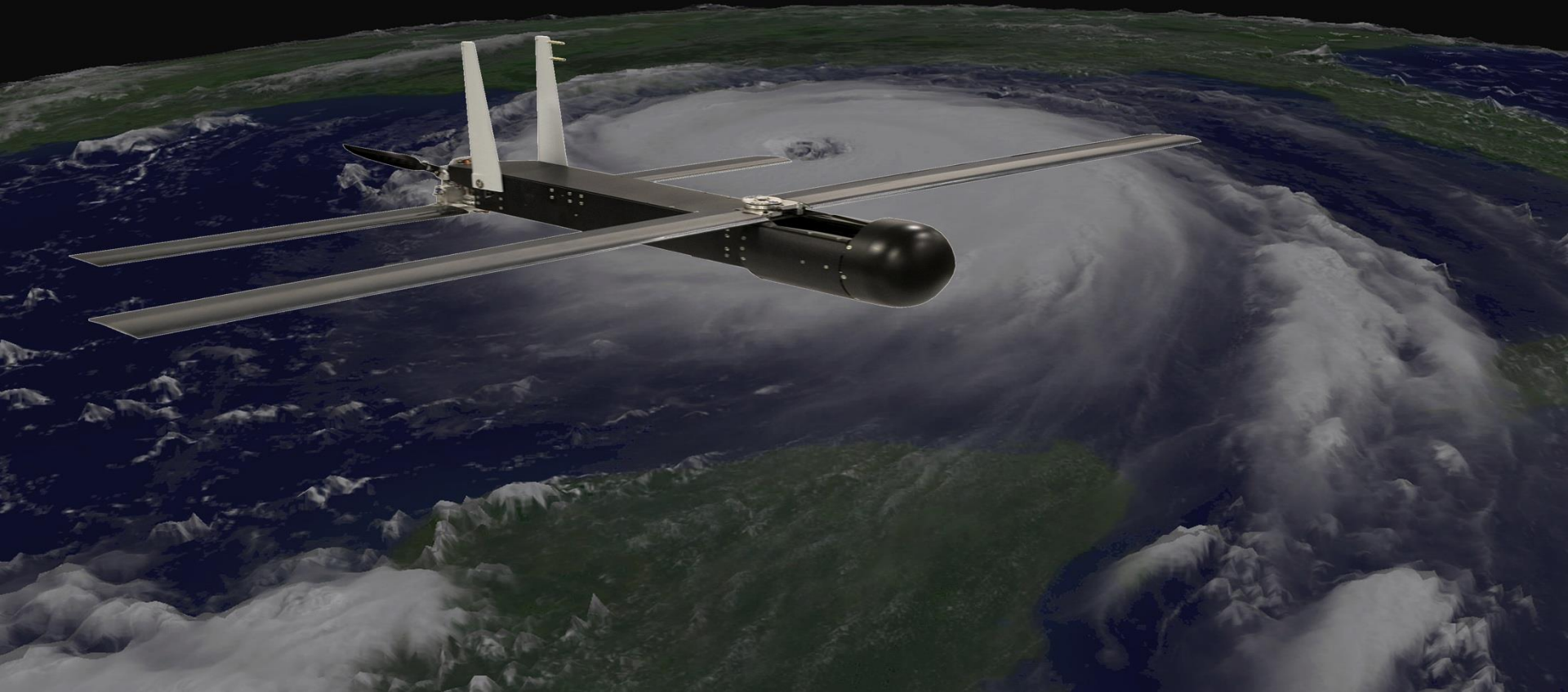
Drones give whales a breathalyzer test

Science Translational Medicine | **AAAS**

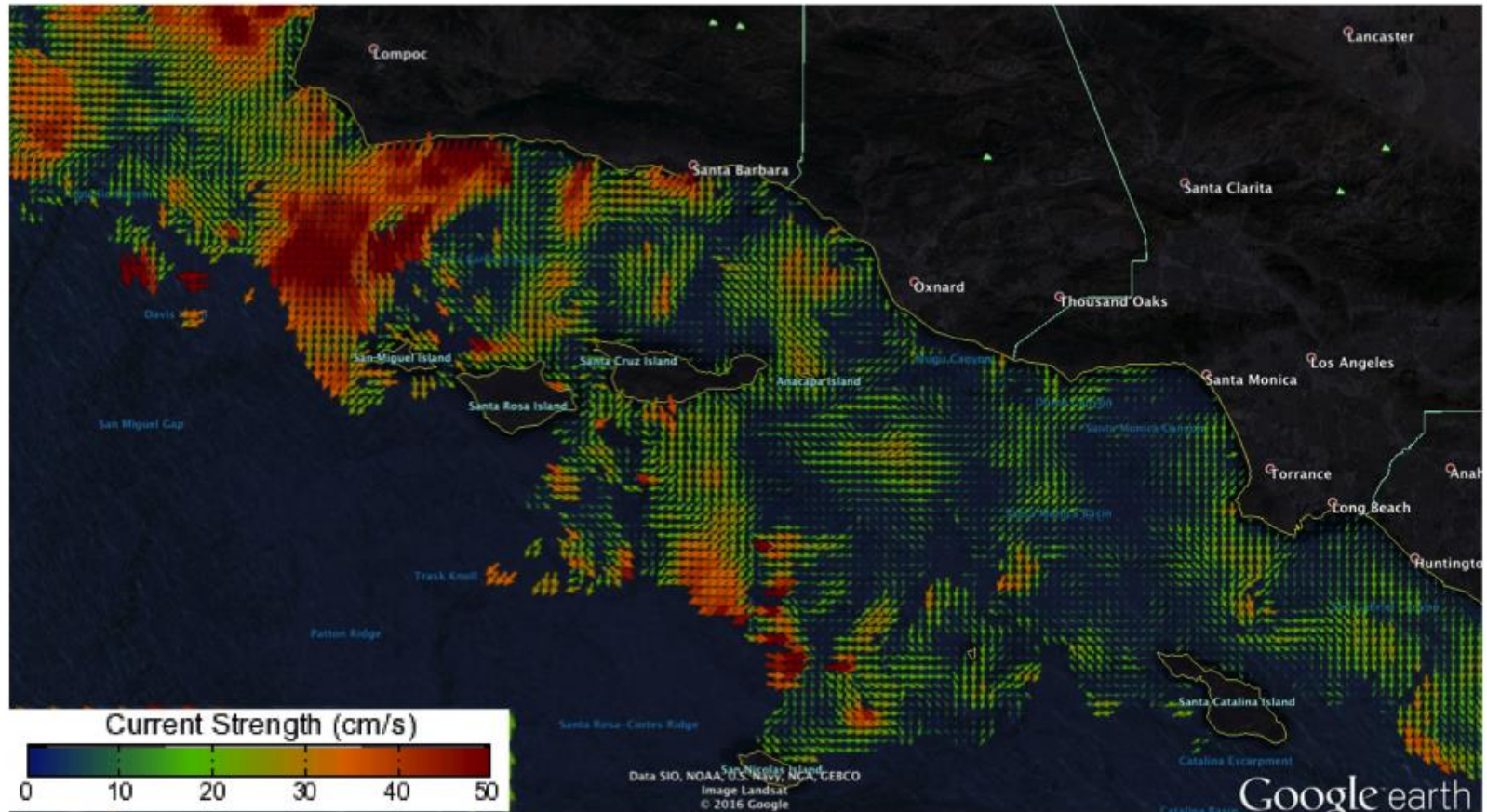
Katie Sweeney – Disturbance Assessment



Joe Cione – Coyote system for hurricanes



Eduardo Romero – surface currents from HF radar



Michele Jacobi - Office of Response and Restoration



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17 talks

3 QA Sessions

Posters